WHAT IS CLAIMED IS:

1. A laser diode system for propagating multiple laser beams of different wavelengths along the same optical axis, the system comprising:

at least two laser diodes, each of said laser diodes including a first reflective coating on a back facet and a second reflective coating on a front facet; and

laser support structure for supporting said at least two laser diodes in a substantial abutting relationship, wherein each of said at least two laser diodes output a wavelength different from any other one of said at least two laser diodes and wherein an output of one of said at least two laser diodes provides a laser output containing beams from each of said at least two laser diodes, said contained beams retaining their original wavelengths and being aligned in the same optical axis.

2. The system according to claim 1, wherein said laser support is a heat sink.

3. The diode system according to claim 1, wherein the first and second reflective coatings of the front facet and the rear facet provide very narrow band reflectivity with said coatings being transparent outside of said narrow band thereby allowing light of wavelengths outside said narrow band to pass directly through the diode.

4. The system according to claim 1, wherein diffraction properties of each of said beams in said output are identical and are provided as a function of a final exit aperture of said one laser diode.

5. The system according to claim 1, wherein each of said at least two laser diodes are Fabre-Perot lasers.

6. The system according to claim 1, wherein each of said at least two lasers are broad-area emitter lasers.

7. A method for aligning multiple laser beams along an optical axis, the method comprising the acts of:

providing a plurality of laser diodes;

coating a back facet and a front facet of each of said plurality of diodes;

arranging said plurality of diodes in a substantially sequential relationship on a support structure whereby a resulting laser output contains a laser beam output from each of said plurality of diodes and wherein each of said output laser beams is aligned in a same single optical axis.

8. The method according to claim 7, further including fixing each of said laser diodes onto a heat sink.

9. The method according to claim 8, further including hermetically encasing said plurality of laser diodes on said heat sink.

10. The method according to claim 7, wherein said coated front and rear facet of said plurality of diodes provides a narrow band reflectivity, which allows light of wavelengths outside said narrow band to pass directly through.

11. An optically aligned arrangement of laser diodes, comprising:

a plurality of laser diodes with each of said laser diodes outputting different wavelengths;

a support device retaining said plurality of laser diodes in a series of back-two-back substantially abutting relationships, each of said plurality of laser diode having front and back coated facets wherein one of said plurality of laser diodes outputs a plurality of laser beams wherein each of said plurality of laser beams respectively corresponds to each of said plurality of laser diodes and wherein each of said laser beams proceeds from said one laser diode in a single same optical axis.

12. The arrangement according to claim 11, wherein said support device is a heat sink.

13. The arrangement according to claim 11, wherein said output beams provide an optical fiber input.

14. The arrangement according to claim 13, further including an optical fiber for receiving said optical fiber input and outputting a fiber output to a scanning device.

15. The arrangement according to claim 13, further including an optical fiber for receiving said optical fiber input and providing an output to a micro-electro-mechanical-system projection display device.

16. A laser diode system, comprising:

at least two individual laser diodes aligned one behind the other, a first of said two laser diodes outputting a first laser beam of a first wavelength along an optical axis into a second of said two laser diodes; and

wherein the second laser diode outputs a laser beam containing the first and a second, different, wavelength along the optical axis.